

The New Amberola GRAPHIC

10
98

Phonograph Forum: The Edison Army & Navy Model.....	3
Some Columbia Controversies.....	5
Ozocerite and the Bell and Tainter Graphophone.....	9
Little Wonder Update.....	12
Obituaries.....	13
Life in the Orthophonic Age: A Balanced Look at Western Electric (Part 6).....	14
In Review.....	16
Syracuse U. to Build an Ear to Hear Fragile Voices.....	17

The New Amberola Graphic

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Editor's Notes

Your editor has found himself in the doldrums for some months now, making it more difficult than ever to get this issue out. I'd like to redo its layout, but there's no time left...so out it goes! I hope to have #106 to you in a more timely manner.

--M.F.B.

3

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Don't let this happen to you! Let us know when you move (second class mail does not get forwarded automatically).

PHONOGRAPH FORUM

BY GEORGE F. PAUL

By the time the United States entered World War I on April 6, 1917, the talking machine industry had embraced cabinetry as the most crucial component of potential sales. Mechanisms had been virtually standardized by each of the “Big Three” phonograph companies: Victor, Edison, and Columbia. Each company offered its own cabinet styles which vied for the eye of the prospective purchaser. “Period Design” became an expectation of customers who were increasingly members of the distaff side. Housewives demanded and received ever more elaborate cabinets housing conventional phonograph mechanisms. Brunswick, a newcomer to phonograph retailing, contributed strikingly beautiful cabinets to the trade. Yet, Edison, with its “Art Models” retailing from \$1000 to \$6000 occupied an enviable position in the “cabinet wars,” built upon the formidable imprimatur of its famous founder.

The outbreak of the “Great War” didn’t divert Edison’s focus on cabinetry, but rather led it in a bizarre direction. What followed was an Edison Phonograph housed in a virtual ammunition crate, painted olive drab for the Army, or gray for the Navy.

In a talking machine era where “cabinet was king,” the Edison Diamond Disc “Army & Navy” Model had little to commend it. Admittedly built more like a tank than a tea table, the machine was so heavy, nearly 100 pounds, that it took two men to carry it comfortably. Prototype models had been built by May 29, 1917, production began on June 6, and the new “Army & Navy” Model was publicly exhibited in the Grand Ballroom of the Waldorf Hotel on July 12.

In the *Edison Diamond Points* magazine for July 1917, the company stated that: “Soldiers must have music. It is an essential of warfare, next in importance to ammunition, food and courage.” In order to supply this music close to the front lines, Edison would sell an “Army & Navy” Model to civic organizations and church groups for \$55.00 (which included an extra spring and barrel). These phonographs were then donated to local units headed for France. These charitable organizations usually donated \$25.00 worth of records with each

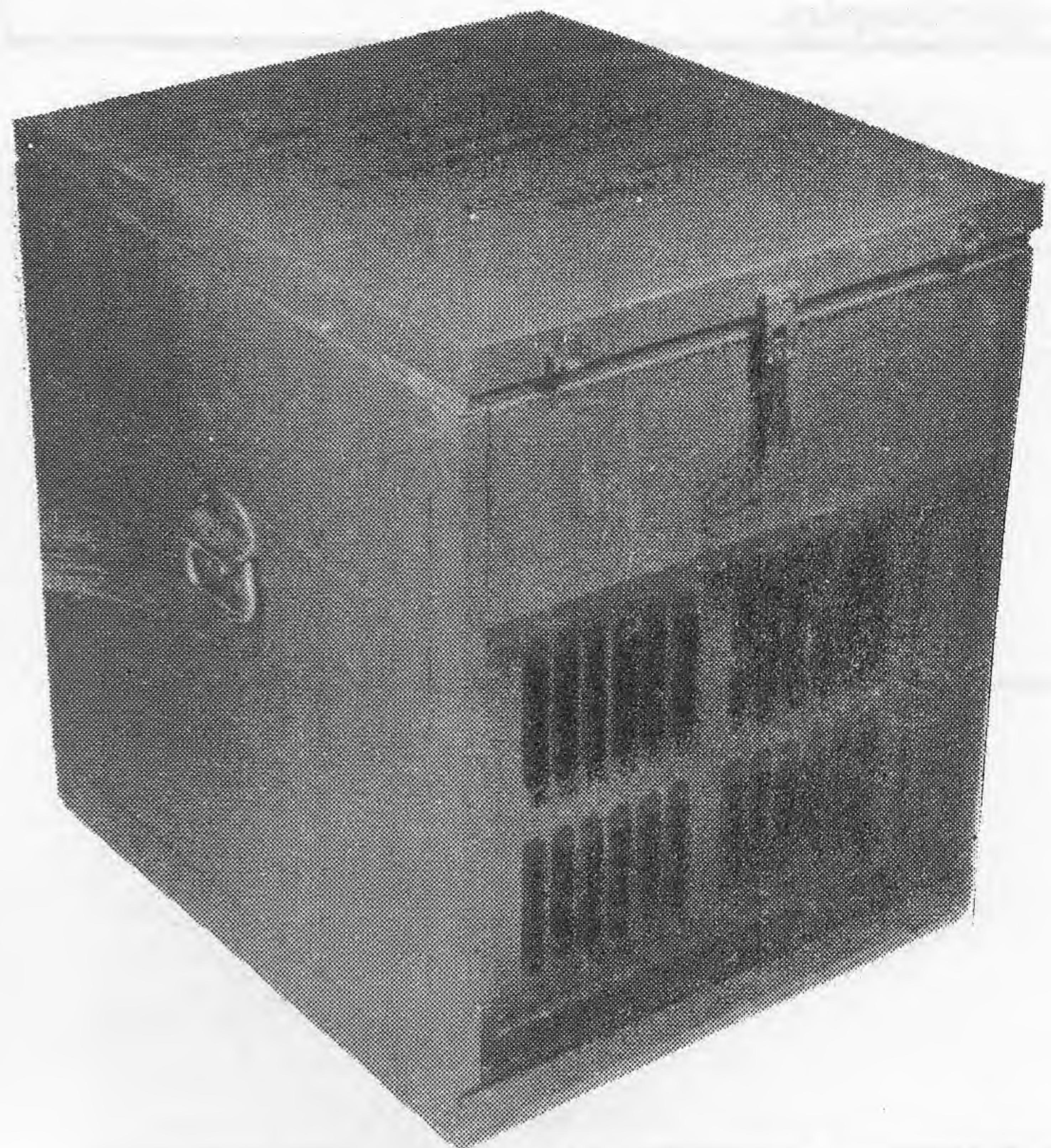
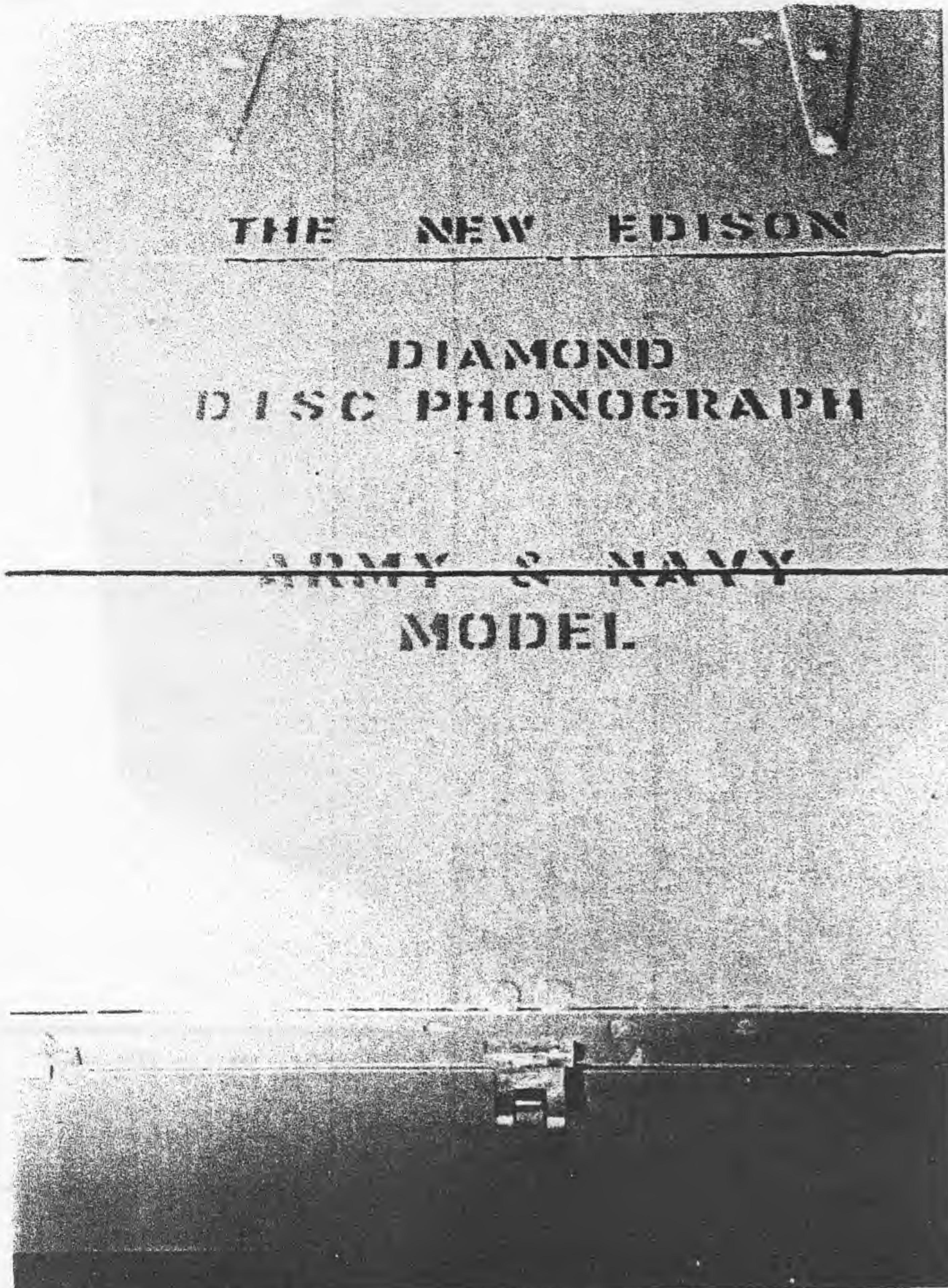


Fig. 1: The “Army & Navy” model, looking more like an ammunition crate than a phonograph. The metal grille weighs nearly four pounds!

machine, bringing the total to \$80.00.

1st Lieut. Earl E. Hansen stated in the May 1918 issue of *Edison Diamond Points*: “There is not another machine made that could possibly withstand the hard handling and rough wear that this machine has had in the long trip over here, and at the same time retain the wonderful tone it has and give such complete satisfaction in every way. It is the ideal machine for which it was built and I am more than satisfied in my selection of this phonograph. It has never been out of order in any way and every company, troop or battery in the U.S. Army should have one.” One may suspect the presence of the Edison copyist behind Lieut. Hansen as he wrote, but no one can deny the rugged, almost bullet-proof characteristics of this machine. The turntable bolted to the underside of the lid for transport. The delicate reproducer was housed in a wooden cradle above the bedplate. The horn was equipped with a clamp to secure it during handling, and a cover was provided for the crank escutcheon to keep out the mud. The grille was stamped from heavy gauge steel, and weighs almost 4 pounds by itself. Along

Fig. 2: The lid of the Edison "Army & Navy" Model. Note the "Edison" script below. This is not a decal, but a stencil or light stamping.



with the spare mainspring and barrel, each "Army & Navy" Model came with a supply of graphite, grease, and oil. This was clearly a machine made to take a lot of punishment.

Yet, surviving photographs of Americans in France during 1917-1918 listening to talking machines show a preponderance of Victrola "IVs" and "VIIs." The reason is obvious. For \$25.00 (or \$32.50 by the end of the war), a unit could purchase a Victrola "VI" which was easily carried by one soldier. Victor records were only 75 cents apiece as opposed to Edison Records at a dollar.

The Edison "Army & Navy" Model has all the indications of having been designed by someone who never experienced front-line conditions. As many returning doughboys could have attested, despite the Edison's cumbersome indestructibility, the filthy, noisy conditions in the lines were no place for a phonograph. Artillery batteries and rear areas were the obvious venues for such comforts, and the Edison was overbuilt for the purpose. If the little Victrolas of the period could survive behind the front, why lug around the 100 pound Edison?

As a final, fatal blow to the "Army & Navy" Model's prospects for long-term survival, the usual method of dispersal of these machines after the war was for the unit to hold a lottery to determine which soldier would take the machine home with him. One can well imagine the reaction of the soldier's wife or mother when he deposited this olive-drab crate in the parlor! Far more welcome would have been a small Victrola, designed as it was for the home.

Indeed, collectors today who are "lucky" owners of this machine, can attest to its lowly status in the eyes of guests. Despite its rarity and the oddities of its construction, this model remains generally unloved (especially by those of us with collections on the second-floor!). Only those who are drawn to the lunacy of its design and the tragedy of its intended application are likely to fully appreciate this phonographic white elephant.

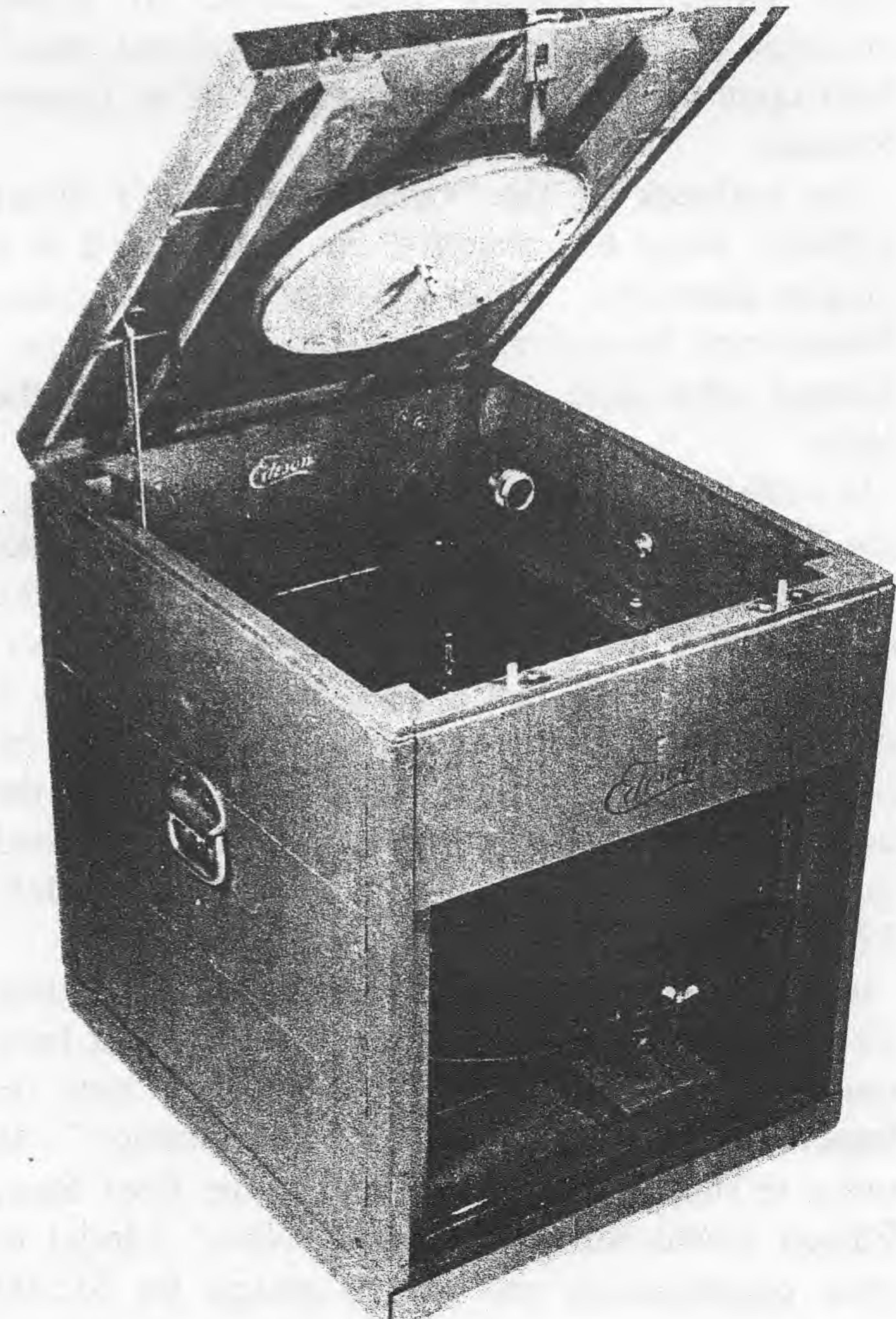


Fig. 3: With the grille removed, the horn clamp may be seen. The crank is stowed alongside the wooden block in the right foreground. The turntable is bolted beneath the lid for transport.

Some Columbia Controversies

by Tim Brooks

In the course of compiling volumes one and four of the Columbia Master Book Discography—the volumes covering the earliest, least-documented period of Columbia disc production—I was forced to confront a number of long-standing discographical controversies. (1) Rather than simply repeat possibly erroneous information, each one was freshly researched, to the extent possible. Whether or not you agree with the conclusions, the facts regarding some of these enduring mysteries are interesting.

#1: The Case of the Forgotten Brother

As most collectors know, Len Spencer (1867-1914) was one of the most prolific performers and producers in the early days of recording. Beginning about 1890, virtually at the inception of the recording industry, he recorded first for Columbia, and then for the New Jersey Phonograph Company, Edison, Berliner, Victor and practically every other significant label until his death in 1914. He had a deep, distinctive voice, and it is no wonder that when Columbia issued one of his specialties with a voice that sounded like his—perhaps even labeled as by “Mr. Spencer” or by “Spencer and Schweinfest”—collectors assumed that it was Len.

However Len had a younger brother, Harry (born Henry) Spencer (1875-1946), who also recorded. The number of records he made came as a surprise even to historian Jim Walsh, who, in his first, 1947 article on Len stated that Harry had apparently made only one solo recording, and assisted his brother on one other.(2) By 1958, when he published a follow-up article, Walsh had learned that Harry made many more than that, and could be found on at least five labels—Columbia, Edison, Berliner, Zonophone and Leeds.(3)

In fact, Harry Spencer was a familiar voice on Columbia cylinders and discs during the late 1890s and early 1900s. He was frequently heard bantering with Len on the latter’s minstrel records (as “Mr. Henry”), and from the late 1890s until 1902 or 1903 he appears to have been Columbia’s regular studio announcer, doing most of the spoken introductions. He was also its principal artist for spoken word records. Twenty-six sketches and monologues, on discs numbered between 19 and 880, are tentatively or positively identified as by him in the Columbia Master Book. (There may well be others.) The best known is probably “Address by the Late President McKinley at the Pan American Exposition” (833), which is identified as Harry in its Marconi issue.

Most troublesome, however, has been Columbia 21, the famous “Arkansaw Traveller” (sic), in which a country rube cracks jokes at the expense of a citified passerby while playing snatches of “The Arkansas Traveler” on the fiddle. Numerous articles and liner notes attribute this best-selling title exclusively to Len, referring either specifically to Columbia or more generally to all principal versions. The Edison and Victor versions are labeled as by Len Spencer. The even more common Columbia version (no. 21), however, is generally uncredited, or credited only to “Spencer and Schweinfest,” with no first names given. The fiddler is clearly multi-talented instrumentalist George Schweinfest. Most assume that the “Spencer” is Len. But is it?

As with the McKinley speech, the Marconi issue is specifically identified as by Harry Spencer. His name is found both in the 1907 Marconi catalog and on the disc itself. The Marconi release uses ten-inch Columbia matrix 21, take 12. This is by far the most commonly found take, which is also found on most Columbia single-face and double-face (A406) issues, as well as on several client labels (Harmony, Lakeside, Oxford, Silvertone).

Matrix lists compiled by Columbia librarian Helene Chmura in the 1950s, from now-lost company files, also identify the artist as Harry.

Aural comparison also suggests it is Harry, not Len. While the brothers had similar, deep baritone voices, Len had a florid, heavily modulated style of delivery, much like the mock tragedians he sometimes imitated on record. Harry, by comparison, was usually pretty flat and emotionless, almost stiff. Play the Columbia version of “Traveler” side by side with the Victor or Edison and you’ll see what I mean.

Company files are now gone, so none of this proves conclusively that Columbia 21 is by Harry Spencer. Some collectors will probably go to their graves insisting it is Len, because it “sounds like him.” However I know of no copy that is labeled or announced as by Len, and the above evidence seems rather compelling. Certainly the most common Columbia take was by Harry Spencer, and most likely, all of them were.

Although there are no recording files extant for pre-1910 Columbia, matrix 21 would presumably have originally been recorded in 1901 (it first appeared on Climax). The only way to date the long-lived take 12 would

be to determine the earliest label style on which that take is found. This writer's earliest copy of take 12 is on a disc bearing the black and silver label, with "Columbia Phonograph Co., Gen'l" arched across the top and a single prize shown next to the spindle hole—"Grand Prize Paris 1900." Sherman and Nauck, in their fine label guide Note the Notes,(4) date this label (III.B.1) as in use only during 1905. Does anyone have take 12 bearing an earlier label?

Other takes that have been reported (less frequently) are seven-inch takes 2 and 7, and ten-inch takes 1, 2, 3 and 13.

Ironically, it is possible—though not certain—that Harry Spencer, not Len, may have had the best-selling single version of this famous routine. (Considering versions on all labels, Len would have sold more.) Early Columbia pressings turn up often, and Columbia A406 remained in the catalog until 1926 (with artist credit given simply as "talking"). The master was also issued on numerous other labels, which are frequently found. Len's Victor version was last remade in 1908, reissued on no other label, and I believe is found somewhat less often (although it too stayed in the catalog until the 1920s). Comparative sales of Edison wax cylinders are difficult to judge, since they are fragile and not as many survive as discs. Len's four-minute Edison cylinder version was reissued on Blue Amberol 3745, but not on Diamond Discs.

The postscript on Harry Spencer is sad. He seems to have done little recording after 1902, although he continued to work for his brother at the latter's theatrical agency. After Len died suddenly in 1914 Harry briefly ran the agency, but due to his mismanagement it dissolved. He then started several unsuccessful businesses and worked for some years for the Pennsylvania Railroad. Eventually he went insane and was committed to an asylum, where he wrote a raving letter denouncing his relatives and accusing them of conspiring against him. He died there in 1946.(5) Then, as now, he remained the "forgotten" brother, always in Len's shadow.

#2: The Case of the Two Tenors: Ferruccio or Diego?

Among the better known serious recordings on early Columbia are the 11 sides by Giannini, a mix of Neapolitan airs and operatic arias, two of them duets with Alberto De Bassini. They were made in late 1903 and early 1904, and numbered between 1484 and 1771. Catalogs and labels identified the singer only as "Signor Giannini," but collectors and writers have always assumed that meant Ferruccio Giannini, the pioneering tenor who was the first "serious" operatic artist to make recordings, for Berliner in 1896, and later for Victor and Zonophone.

It was certainly a surprise, therefore, to discover that in later Columbia catalogs these 1903-1904 recordings were credited not to Ferruccio but to Diego Giannini, an obscure tenor then recording in the Columbia "E" series. In the early 1900s Columbia did not routinely identify artists in its catalogs, and sometimes not on the labels either. However with the advent of double-discs in 1908 this policy was gradually reversed, and in July 1912 the general catalog underwent a major overhaul, with many artist names added or expanded. "Signor Giannini" became "Diego Giannini," which it remained until the last of his discs was deleted in 1914. Several collectors I contacted were surprised by the discovery, and suggested that since it was from an original source, it might well be true.

In this case, however, collectors are right and the Columbia catalog editors were wrong. I subsequently obtained copies of some of the original 1904 single-face discs, and they are announced as by Ferruccio Giannini. The announcements are delivered with a wonderful flourish ("Ferr-UUCH-io!"), in a heavily accented voice that is no doubt that of the tenor himself. These announcements, which by the way are worth the price of the disc, had been physically deleted from the master by the time the double face versions were issued, and the 1912 Columbia editors probably assumed the artist was the only Giannini then recording for the company. Diego, who was apparently not related to Ferruccio, continued to record until the 1920s.(6)

The moral? Don't believe everything you read, even if it comes from a period source. If it seems illogical, look for additional evidence.

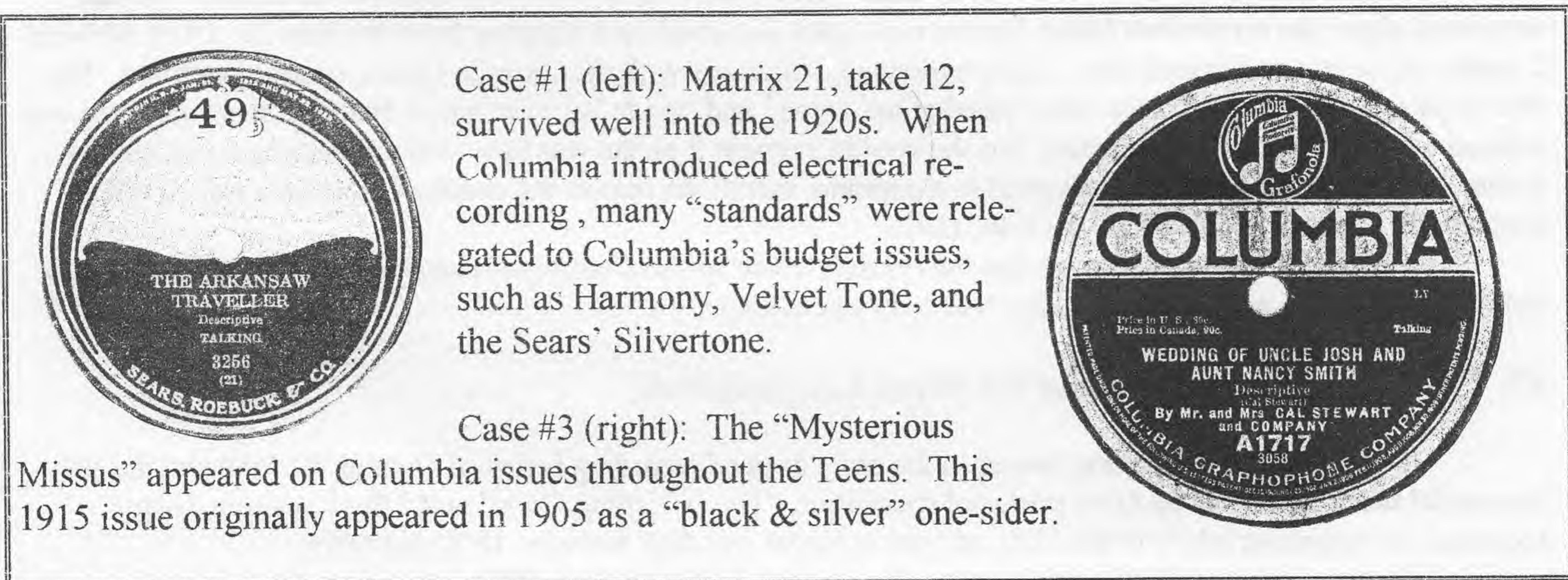
#3: The Case of the Mysterious Missus

Cal Stewart was probably the best-selling comic monologist of the entire acoustic era. His "Uncle Josh" yarns were the equivalent of a modern-day TV sitcom (Green Acres, perhaps), describing in loving detail the lives of the denizens of Punkin Centre—Jim Lawson the drunk, Ezra Hoskins the tavern owner, Si Pettingill the grocer, Hank Weaver, Deacon Witherspoon, and many others. In 1905 the semi-serialized story took a new turn, as Josh took a shine to widder Aunt Nancy Smith, ultimately marrying her in "The Wedding of Uncle Josh and Aunt Nancy Smith" (Columbia 3058). Aunt Nancy was also heard on other Uncle Josh recordings around this time, during their courtship and after the marriage, as in "Uncle Josh and Aunt Nancy Go to Housekeeping" (3229).

The labels and catalog listings for these early sketches credit them to "Mr. and Mrs. Cal Stewart." When they were remade in later years they were credited to Cal Stewart and Ada Jones, and many collectors insist that the woman's voice was, from the beginning, that of Jones. But why would Columbia disguise so famous an artist as Ada Jones, whose popularity could only have sold more records? Once again we turn to historian Jim Walsh, who began writing about pioneer artists in the late 1920s and whose sources included people who knew and worked with Stewart, including orchestra leader Fred Hager. In 1951 Walsh wrote, "In the records made during the early 1900s the part of Aunt Nancy is taken by Mrs. Cal Stewart herself. Mrs. Stewart was a Tipton, Indiana girl, Rossini Waugh, who is described by Fred Hager as a talented violinist. She traveled with the troupe, which Stewart formed to give entertainments based on the Punkin Center characters. Her brother, James W. Waugh, was also a member of the group, which Mr. Hager says was a great favorite in the Middle West."(7)

Walsh had evidently heard the rumors that the original Aunt Nancy was Ada Jones. Later in the same article he commented that "some collectors have the impression that records labeled as by 'Mr. and Mrs. Cal Stewart' were actually made by Stewart and Ada Jones, and even that they were married to each other, but this is wrong."

Aural evidence confirms what Walsh told us nearly half a century ago. Although Waugh and Jones had similar voice quality, the former's voice is rather thin and harsh, and she giggled incessantly. Jones sounded a lot more natural; Walsh observed that she developed an acidulous streak absent from Waugh's more innocent conception of the role. Playing a "Mr. and Mrs. Cal Stewart" disc next to one by Stewart and Jones quickly reveals the differences—to most collectors.



Case #1 (left): Matrix 21, take 12, survived well into the 1920s. When Columbia introduced electrical recording, many "standards" were relegated to Columbia's budget issues, such as Harmony, Velvet Tone, and the Sears' Silvertone.

Case #3 (right): The "Mysterious Missus" appeared on Columbia issues throughout the Teens. This 1915 issue originally appeared in 1905 as a "black & silver" one-sider.

Waugh played the role of Aunt Nancy for several years. She is not always billed on the label; for example her name does not appear on "Uncle Josh's Courtship" (nos. 1906 and A396), although her voice is clearly heard. The original Uncle Josh-Aunt Nancy productions are found only on Columbia, since at the time (1904-1905) Stewart was recording exclusively for that label's cylinders and discs. When the exclusive disc arrangement ended Stewart and his wife recorded the routines for Victor, in early 1907.

Most references are vague as to when Ada Jones took over the role of Aunt Nancy, implying that it was soon after this. McNutt in his Cal Stewart biography says that it was in 1910.(8) However the earliest I can find Ada Jones billed on a record with Stewart is in 1919, the year he died. Ada Jones seems to have taken the role only at the very end of Stewart's career. One of my favorites from this period, incidentally, is "Evening Time at Pumpkin Center" (A2789), in which the usually stuffy Henry Burr affects a ridiculous rural accent in a vain effort to fit in.

The real-life missus seems to have been Stewart's preferred female partner on record.

#4: The Case of Madame Noe.

The celebrated sextette from Lucia di Lammermoor was one of the most famous and frequently performed operatic arias of the early 1900s. It was sung by all manner of artists, burlesqued by vaudeville troupes, even arranged as a fox trot. Irving Berlin's comic version, as sung by Billy Murray with the Vaudeville Quartette on Victor 17119, is a delight ("That note alone is worth a dollar!"). You could cut a rug with the cheery fox trot

version by Paul Specht and His Orchestra on Columbia A3708.

Victor made a splash in 1908 when it released an all-star version of the Sextette, featuring major names from its Red Seal roster—Sembrich, Caruso, Scotti, Journet, Severina and Daddi (Victor 96200). At the extraordinary price of \$7 for one twelve-inch, single-faced disc it was the most expensive record in the Victor catalog. It nevertheless sold well among status-conscious buyers, judging by the number of copies that survive. Columbia, lacking Victor's stellar talent lineup, responded as best it could with its own celebrity sextette in 1910, priced at \$7.50 (Columbia A5177, later available as single-faced 30443 for \$5.00). The Columbia artists were Bronskaja, Freeman, Constantino, Blanchard, Mardonnes, and Cilla. Victor later brought out additional celebrity versions with varying lineups (but always including Caruso), in 1912 (96201) and 1917 (95212).

The plot thickened in 1920 when Columbia decided to remake its “celebrity sextette.” This new recording was released in January 1922 as single-faced 49768, and later on double-face 74000-D, 9014-M and other issues. This time the celebrity artists were Barrientos, Hackett, Stracciari, Mardonnes, Meader and Noe.

Noe? While it is true that earlier celebrity versions usually included one or two voices of lesser rank (Severina, Cilla), Noe was totally unknown to the collectors I surveyed. The name seems to have been unknown to Columbia customers in 1920 as well. It appears on no other known Columbia recordings, or for that matter on any label I have been able to trace. Columbia said nothing about the singer in its announcement of the record.

The sextette is composed of a soprano (Barrientos), two tenors (Hackett, Meader), baritone (Stracciari), bass (Mardonnes) and mezzo-soprano. By process of elimination, Noe must be the mezzo, so at least we know it's a woman. A first thought was that perhaps the catalog editors meant Doris Doe (I'm not making this up!), a rather obscure contralto who recorded duets with Homer Rodeheaver and others, and was a member of the Columbia Light Opera Company later in the 1920s.(9) Then opera expert Larry Holdridge came to the rescue. He had wondered about the mysterious Mme. Noe as well, until he turned up a clipping from the June 26, 1919, Musical Courier, regarding one Emma Noe. Larry explained, “She was with the Chicago Opera, singing contralto. She then worked with Minnie Tracey who ‘mended her voice,’ and ‘made her over into a dramatic soprano.’ She was offered a Covent Garden engagement, but she couldn't accept it as she was busy with other contracts accepted earlier. Although she had been converted to a soprano, there's no reason she couldn't have done the recording, particularly as she probably knew the role.”(10)

Of course this does not prove that the mystery voice on the Columbia recording was that of Emma Noe, but it seems likely. After all, how many Noe's do you know?

#5: The Case of Cal Stewart and the Negro Laughing Song

One of the most interesting stories in the early days of recording is that of George W. Johnson, the first successful black artist. He had two principal specialties, “The Whistling Coon” and “The Laughing Song,” recorded for numerous labels in the U.S., on both cylinder and disc, between 1890 and 1910.

Johnson was one of Columbia's best selling artists during the late 1890s, and when the company introduced disc records in late 1901 (on the Climax label), it promptly recorded him doing his two big titles. The numbers were 210 for “The Negro Laughing Song” and 211 for “The Whistling Coon.” Judging by the numbers, the early takes, at least, were presumably made during late 1901, although I have never seen a copy of either on the Climax label, which was in use until mid-1902. Both titles do turn up, rather frequently, on Columbia single face and double face discs, as well as on client labels. Toward the end of the single-face era “The Whistling Coon” was remade by Billy Murray (10-inch take 9), but all copies of “The Laughing Song” that I have ever seen or heard of are by Johnson. That includes six takes on four labels.

This is where the mystery begins. When British Columbia introduced double-faced discs in October 1907, one of its very first offerings was “Negro Laughing Song” on number D4—credited to Cal Stewart. The title was also available as single-face disc 210. On the reverse was Murray's version of “The Whistling Coon” (211).(11) The single-face numbers prove that these are U.S. recordings, but no copy of the disc has ever turned up to confirm the identities of the singers, or the takes used. Meanwhile, when Columbia brought out double-discs in the U.S. a year later it used Johnson's version of the song. There was even a late take (12) on which Johnson's original piano accompaniment was replaced with an orchestra.

It is a little strange that British Columbia chose to include these very American recordings on its inaugural double-face list. Perhaps the fact that there had already been popular British versions of the songs by Burt Shepard on Berliner, Gramophone and Zonophone led the company to think patrons might find the U.S. versions amusing as well.

To confuse the matter even further, matrix lists compiled by Columbia librarian Helene Chmura in the

1950s, from now-lost company files, identify the artist on 210 as Cal Stewart. Oddly, George W. Johnson's name does not appear in these lists at all. Perhaps only the last artist to record a title was reflected in the files. Perhaps the Stewart take, whatever it was, was made specially for England.

Poor old George suffered many indignities in his lifetime. Despite the fact that he had been one of Columbia's best selling artists a few years earlier, it appears that the company had both of his trademark titles remade by others, while he was still alive. He couldn't have laughed at that.

- (1) Tim Brooks, *The Columbia Master Book Discography*, Volume 1; Volume 4 (with Brian Rust) (Greenwood Press, 1999).
- (2) Jim Walsh, "Len Spencer," *Hobbies*, May 1947, p.18.
- (3) Jim Walsh, "Leonard Garfield Spencer as His Daughter Ethel Lovingly Recalls Him," *Hobbies*, July 1958, p.30. Walsh also remarked on his error in a column on Cal Stewart, in the February, 1951, issue, p.22.
- (4) Michael W. Sherman and Kurt R. Nauck III, *Note the Notes: An Illustrated History of the Columbia 78 rpm Record Label, 1901-1958* (Monarch Record Enterprises, 1998), pp.21-22.
- (5) *ibid.*, October 1958, p.31.
- (6) see Richard K. Spottswood, *Ethnic Music on Records* (University of Illinois Press, 1990).
- (7) Jim Walsh, "Cal Stewart," *Hobbies*, February, 1951, p.24.
- (8) Randy McNutt, *Cal Stewart, Your Uncle Josh* (Fairfield, OH: Weathervane Books, 1981), pp.53,92.
- (9) Doe is listed in *The Columbia Master Book*, Volumes 3 and 4. She appears as a member of the Columbia Light Opera Company on 50031-D and 50039-D, both recorded in 1927, and she could be on others by that ensemble.
- (10) E-mail to the author from Lawrence Holdridge, October 11, 1998.
- (11) "Columbia Double-Face Records, October 1907" (four page supplement published by the Columbia Phonograph Company, Gen'l, London). A photocopy of this rare item was kindly provided by Frank Andrews.

OZOCERITE And the Bell and Tainter Graphophone

Bruce L. Stinchcomb

One of the critical developments in the early history of the phonograph and recording was the discovery of a suitable medium on which to record. In the Nineteenth Century synthetic polymers such as plastics, ubiquitous, which we take for granted today, did not exist. What was looked for was some natural material that had the right set of properties, which were capable of yielding a good sound recording. Edison's tinfoil phonograph demonstrated that the recording of sound was possible and was basically an experimental device. Its tinfoil records were not even semi-permanent; they were fragile and most importantly the sound quality of the tinfoil was just a parody of the real thing. After the novelty of the device wore off, realization was that what had been recorded was just a fraction of the original sound. As is well known among phonograph historians and collectors, Edison did not pursue the phonograph beyond its

tinfoil stage. Instead he became intensely involved with the electric light and related problems of an electrical distribution system. Work on the phonograph would be taken up by others, and the best known "others" were Charles S. Tainter and Chichester Bell.

Chichester Bell was the cousin of Alexander Graham Bell, who was already well known as the inventor of the telephone. Bell had received a monetary prize (Volta Prize) from the French government for his invention. With the money, he set up what would be called the Volta Laboratory, the intent of which was to experiment with sound, particularly the problems associated with the recording and reproduction of sound. The Volta Laboratory, located in Washington, D.C., would be the home of the first practical phonograph, which Bell and Tainter would call "The Graphophone."

Other than Edison's tinfoil recording and an earlier experimental device of Leon Scott (the Phonoautograph, which made a visual recording only), pathways which might yield to successful recording were entirely unknown. Bell and Tainter tried many of these "pathways," some being "exotic," such as the recording and reproducing by compressed air and magnetic recording. They systematically investigated

any method which might seem promising in their experiments with sound recording and playback. In conjunction with this searching lay one of the most critical problems to be solved in the success of sound recording. This was the discovery of a suitable medium which was capable of capturing the complex vibrations of the cutting stylus and which would retain such recording after playback. Edison's recording medium of tinfoil and other metallic foils was rejected early in their work. After numerous experiments, what was found to work best looked superficially not too different from what Edison had invented. The significant difference, however, was the cutting of the record groove by incising rather than indenting as had been envisioned by Edison. What was also one of the critical elements of Bell and Tainter's phonographic work was the investigation of the performance of various materials, which might be utilized in the process of incising the record groove. Sought after was a material which was homogeneous and structureless. A material which, upon being incised by the recording chisel, would produce no extraneous motion itself but rather would be influenced only by the motion of the vibrating diaphragm to which the chisel was attached.

Natural resins such as rosin, copal or shellac were tried, but these created an unpleasant "white wave" noise in the recording stylus which superimposed itself and "muddied" the sound being recorded. One advantage of Edison's tinfoil method was that with the indenting process, such extraneous noise was minimized. What was required with incising was a material which, upon being incised by the small recording chisel, would not produce extraneous noise. Three groups of natural, homogenous materials were tested. The resins formed one category, asphaltic materials, particularly albertite, was the second, and wax or wax-like materials were the third. Testing was done by coating the metal drum of an Edison tinfoil phonograph with the above mentioned substances. Only the waxes were found by Bell and Tainter to give encouraging results in their ability to produce a suitable recording.

Natural waxes and wax-like materials known in the 1880s included beeswax, ceresin, paraffin, microcrystalline wax, spermaceti and ambergris, montan wax, caranuba wax and ozocerite. Derived compounds made from tallow such as stearin (or stearine) and other tallow related compounds were also tried, many of these having been produced by the French

scientist M. Chevirux (1786-1889) a few decades earlier. Of these various waxes, most were too soft to sustain repeated playback, and many others made noisy recordings. Beeswax, of which there are two types, a soft and a harder variety, were tried, but even the hard variety proved unsuitable as it clogged the cutting chisel. Paraffin and ceresin, paraffin's harder and higher molecular weight relative, were also too soft and would wear extensively on playback, particularly with the fine groove of the 160 thread per inch Bell and Tainter cylinders developed in 1885. The harder ceresin, unlike paraffin, did produce a relatively noise free recording and was, significantly, one of the components in the first solid wax cylinders of Edison's 1887 improved phonograph. Microcrystalline wax, a petroleum derived wax, performed like beeswax: too soft and it made a noisy recording and clogged the recording chisel. Montan wax, derived from lignite (a type of geologically young, brown "coal"), worked; however, in the 1880s there were no reliably available supplies of this material. Mining of western lignite, which could have supplied a source of it, didn't begin until after the turn of the century. Montan wax, significantly, would become an ingredient of both Edison and Columbia moulded black wax cylinders, beginning in the new century. Spermaceti and ambergris, both waxy substances derived from the oil of the sperm whale, were expensive and supplies unreliable. Stearin worked but, like paraffin, was too soft for repeated playback. This left ozocerite, a hard, black or reddish brown natural wax first known and mined in Poland and Baku, Azerbaijan (MacFarland, 1923).

A variety of hard and homogenous organic North American "minerals" were known and mined as early as the 1840s near Hillsborough, New Brunswick, Canada (Dawson, 1879). The most important product produces was albertite, an asphaltic like material named from Albert Mines located near Hillsborough. Not a commercial product, as was albertite, but occurring in veins associated with it, was ozocerite. The albertite bearing oil shales of Albert Mines and their associated and beautifully preserved fossil fish were well known to geologists schooled in the mid Nineteenth Century. These were the same geologists who would engage in a wave of geological exploration previously unequaled, but would be thwarted temporarily by the American Civil War. After the war, the now one-armed John Wesley Powell (1834-1902) noted occurrences of oil shale similar to that of

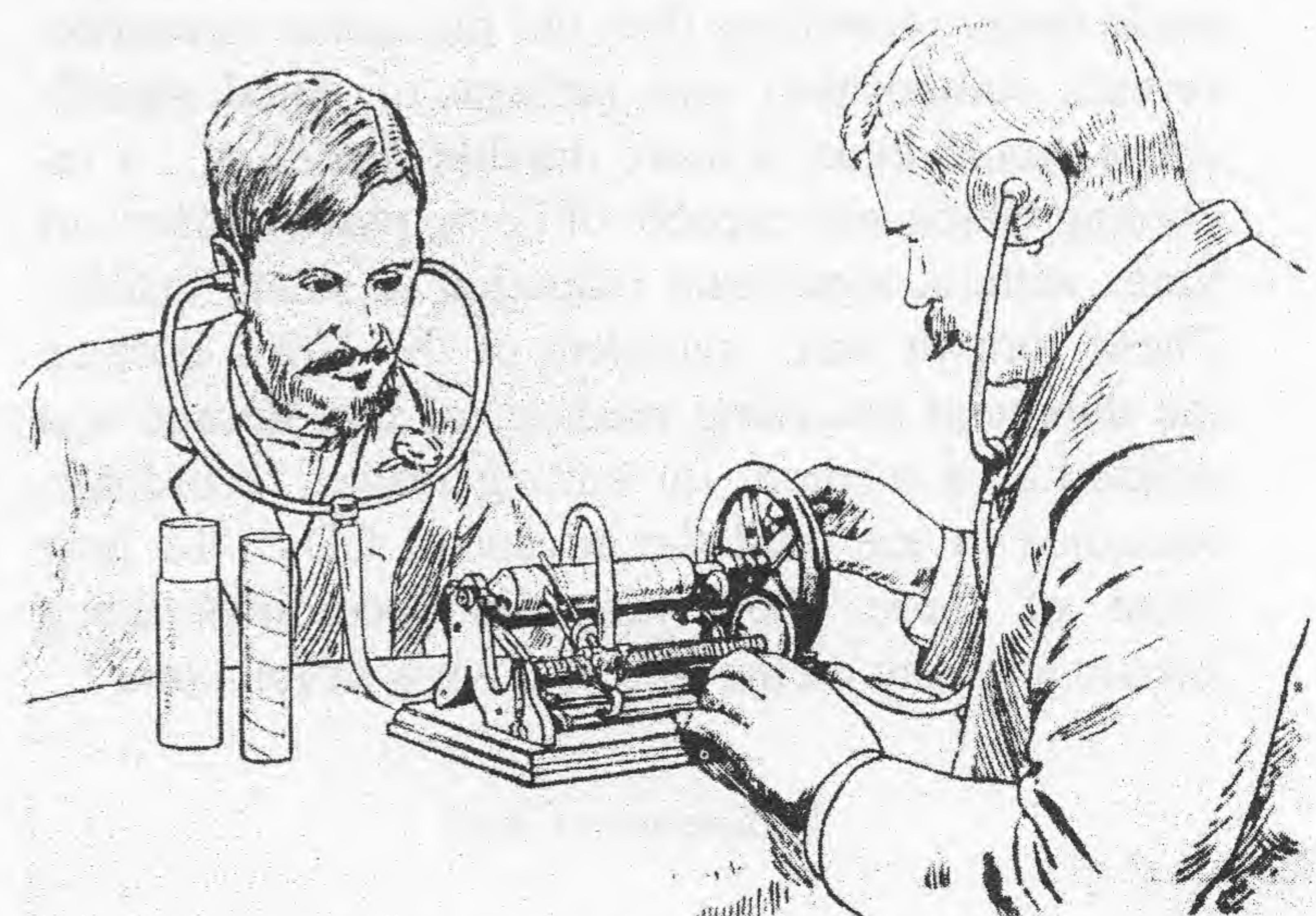
Albert Mines in outcrops along the Green River, Utah Territory. These were noted in the area where Powell began his epochal 1869 trip through the Grand Canyon. Cuts made for the Union Pacific Railway shortly after Powell's visit also yielded fossil fish which were superficially (but not taxonomically) similar to those known from Albert Mines.

Powell's exploration of the Grand Canyon initiated a series of post Civil War geological explorations that evolved in 1879 into the United States Geological Survey (USGS). Geological surveys predating the USGS, such as the Wheeler, King and Hayden surveys of the early 1870s, would investigate and document some of the geological complexity of the American western territories. The 1870 survey of Ferdinand V. Hayden investigated geology and geologic resources from Yellowstone Park southward into Utah Territory. In Utah, Hayden's survey would discover large areas of oil-bearing shale similar to the oil shales of New Brunswick. These oil shales came to be known as the Green River Shale after the major tributary of the Colorado where Powell had started his Grand Canyon trip and were, like the oil shales of New Brunswick, of considerable geologic interest. The Hayden survey also discovered that the Green River Formation contained veins of asphaltic material similar to albertite (the Utah material is now called gilsonite) near Bonanza, Utah. Veins of waxy material were also found further west near Solder's Summit, Utah. This waxy material was similar to the ozocerite of Europe and Albert Mines. It is described in the Hayden Report of 1870, and mining it and gilsonite would begin in the 1880s.

Bell and Tainter were made aware by their research of this material and its occurrence and properties. They obtained some in 1881 with which they coated the drum of an Edison tinfoil phonograph and recorded on it. The performance of ozocerite for sound recording was found superior to any other material they tried. Continued phonograph work by them would produce both a battery and a foot treadle powered cylinder recording device that would be introduced as the Bell and Tainter Graphophone of 1885. This workable recording and playback machine utilized a 1 15/16-inch diameter cardboard cylinder covered with a recording surface of ozocerite. The Bell and Tainter Graphophone was intended (as initially was Edison's 1887 improved Phonograph) for office dictation. These machines were leased in 1886 for such use and when combined with the new

typewriter were the most up-to-date offerings in office equipment. The small diameter of the cylinder of the Graphophone enabled the stenographer to locate with comparative ease, any part of the dictation being transcribed. Unlike Edison's later solid wax cylinder, which could be shaved and reused, Bell and Tainter cylinders could be used only once. Acceptance of this device by stenographers for office dictation varied. Some areas, such as Washington, D.C. and other parts of the East Coasts, accepted it enthusiastically; other parts of the country found little interest in it as an office addition. Overall, however, the Bell and Tainter Graphophone came into great enough use during the late 1880s and early 1890s so that 20,000 pounds of ozocerite were produced from the Solder's Summit area, according to the USGS mineral survey reports of 1889. Much of this probably went into making the Bell and Tainter cylinders, which at the end of the 1880s were being produced by the tens of thousands. In contrast, by 1900 ozocerite is not listed in USGS mineral statistics, which probably reflects the demise of the Bell-Tainter system by that time.

Bell and Tainter Graphophones are rare items today. They exist primarily in a modified form due to their modification to accept Edison-type cylinders in the early 1890s. Graphophones bearing a large pulley plate that states "American Graphophone Co., patent Charles Sumner Tainter" are generally modified Bell and Tainter Graphophones, originally intended to play ozocerite cylinders. Bell and Tainter cylinders are today even rarer than are the machines. The few seen by the author have fine, shallow grooves. The



Listening to a Bell-Tainter Graphophone play an ozocerite-coated cardboard cylinder

12.

fact of them being coated with ozocerite, which is a hydrocarbon, prevents them from being affected by mold, as is so often the case with the stearin based insoluble soap brown 'wax' cylinders of the Edison system.

An ambitious project would be to obtain what Bell-Tainter recordings are known to exist and reproduce electronically what is recorded upon them. This recording could then be digitized, cleaned up and clarified, as has been done with brown wax cylinders of the Edison system. If this could be done, a direct comparison might be made between the (usually considered inferior) Bell-Tainter system and the improved system of Edison.

Bell and Tainter phonographs playing ozocerite cylinders were adapted in the early 90s with "coin in the slot" mechanisms to play musical recordings. From available information, machines and cylinders of the Edison system seem to have been preferred by both phonograph operators and patrons. The last significant use of the Bell and Tainter Graphophone appears to have been during the World Columbian Exposition (Chicago World's Fair) in 1893, where coin-operated Graphophones playing ozocerite cylinders were placed throughout the exposition grounds.

In 1887 Thomas Edison, like Bell and Tainter, would experiment with his improved phonograph and would experiment with recording media. He would at first utilize for his tapered interior, solid wax cylinders a composition made of ceresin, beeswax and stearine. In 1890 his chief chemist, Charles Aylsworth, would devise an aluminum and calcium stearate, insoluble soap composition. This material made better recordings than did his earlier ozocerite-ceresin composition and perhaps of equal significance would make a more durable recording; a recording which was capable of being played dozens of times without significant reduction in sound quality. These "brown wax" cylinders of the 1890s became the dominant recording medium of that decade and utilized as a medium for cutting master recordings, remained in use until the advent of CDs. To hear some of these 100+ year old recordings using Edison's system on the web, try: www.tinfoil.com.

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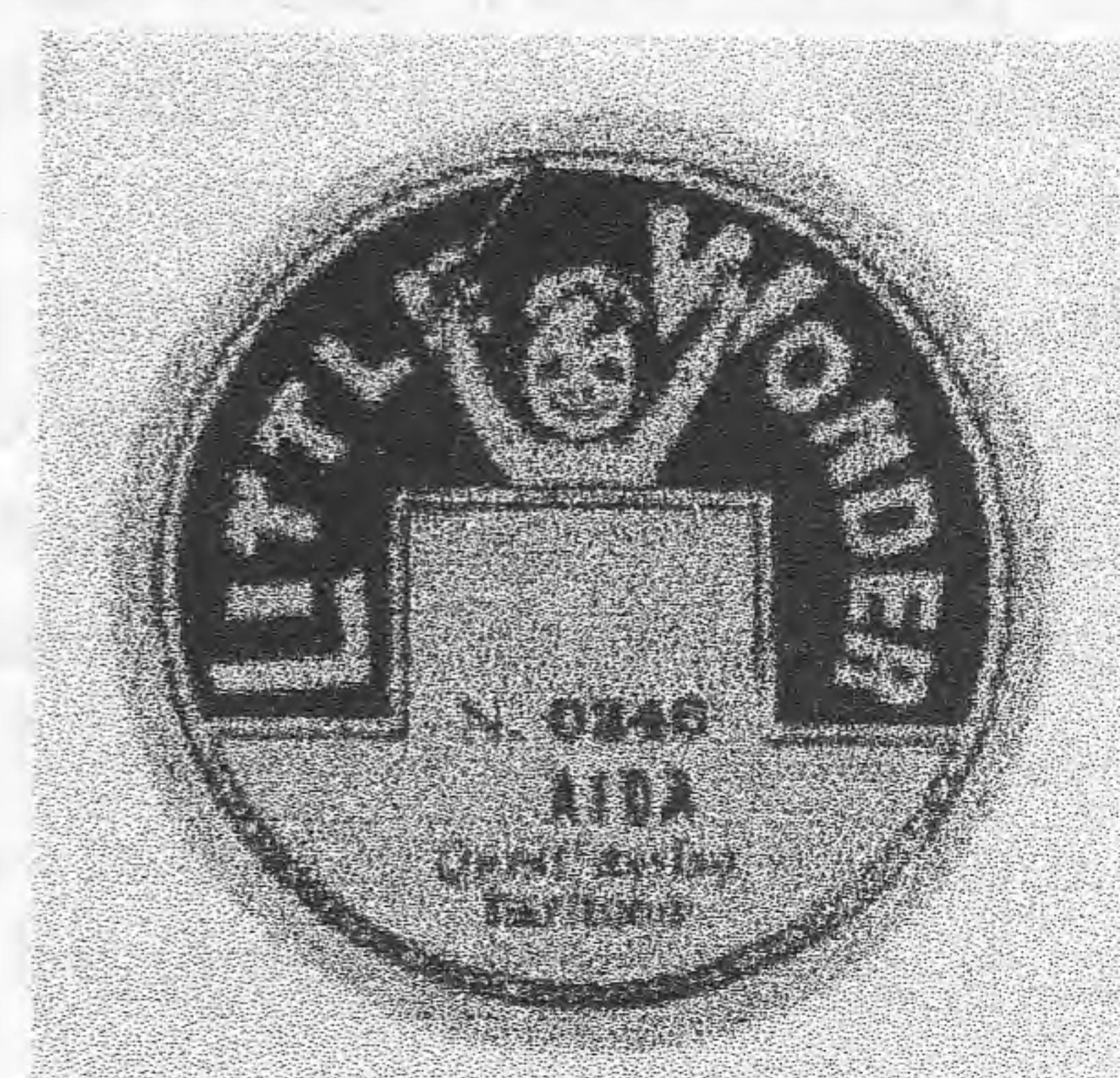
Bruce Stinchcomb has a Ph.D. in geology and is on the faculty of St. Louis Community College of Florissant Valley.

Little Wonder Update



Since the Little Wonder book was published, 21 new titles have been reported! These, as we suspected, were mostly in the upper 4-digit range. An addendum sheet is now being supplied with all copies. If you would like a free copy of this addendum, please send us a self-addressed stamped business size envelope.

More astonishing, Tim Brooks has uncovered a rare Italian 4-panel catalogue for Little Wonders distributed through the Columbia Graphophone Co. of Milan. Although some issues were duplicated, this catalogue shows several Italian and operatic songs in an entirely different series: the 0200s! (It includes such oddities as the Rigoletto Quartette sung by a tenor!!) We speculate that these were recorded in Italy, but lacking any examples we cannot be sure. Do *any* readers own examples of this unusual 0200 series??



ERNEST LOUGH

Choirboy captured hearts of a nation with hit record

British church choir's 1927 recording became first million-selling classical single for HMV

JEREMY NICHOLAS
The Guardian, London

Hear My Prayer and *O, For the Wings of a Dove*, sung by 15-year-old Ernest Lough with the Choir of the Temple Church, London, was one of the most cherished of all early gramophone recordings and captured the beauty of a remarkable treble voice at its peak.

When it was released in Britain in June of 1927 it caused a sensation. In the first six months, it sold 316,000 copies, extraordinary for those days. So successful was it that the masters of the original recording wore out and, nearly a year later, the same forces had to reconvene to make a near-carbon copy of the two sides.

Within three years, *O, For the Wings of a Dove* in its double incarnation had sold more than 712,000 copies. In 1962, it became the first classical single in HMV's history to become a million-seller. Mr. Lough received a gold disc to mark the achievement. It has the rare distinction of never having been out of the catalogue of available recordings.

Ernest Lough, or Fluff as he was invariably known, died on Tuesday at his home in Watford, near London, aged 88. Characteristically modest, he was always at pains to emphasize the contribution of others to his unexpected celebrity: George Thalben-Ball, the organist and choirmaster of the Temple Church, selected him because, from the handful of other boys whose voices were in bloom, it was he who was in the best shape at the time of the recording.

But it was the unusually rich, even tone throughout Mr. Lough's register, his control, complete security of intonation and emotional involvement with the text that made the delivery of the solo part so distinctive and that captured the hearts and imagination of the public.

Lineups stretching from the door of Temple Church to Fleet Street meant that, for the next two years, tickets had to be issued for the Sunday services. Some in the congregation stood on seats to obtain a glimpse of the angelic Mr. Lough. Writer Compton Mackenzie, reviewing the disc in *The Gramophone*, was sure he had never before heard a boy's voice of such beauty, opining that "Master Lough, after his first performance, goes straight into the classic shelves and the company of singers like [Enrico] Caruso. Colonial papers please copy," he added, "because here is an authentic piece of England."

Born in Forest Gate, London, Mr. Lough sang on other Temple

Church Choir recordings over the next 12 months, including *I Know That My Redeemer Liveth*, and *O Come Everyone That Thirsteth*, the latter in a duet with fellow chorister Ronald Mallett.

Mr. Lough's own favourite was his solo recording of *Hear Ye, Israel*, which, with time to spare at the end of a session, he learned in half an hour before recording it on the spot with Dr. Thalben-Ball at the organ.

The success of *O, For the Wings* prompted a number of bizarre rumours concerning Mr. Lough's demise: that he had actually succumbed while singing the words "and remain there forever at rest"; that he had been killed in a car crash; that he had died of consumption aged 7. Mr. Lough was playing soccer outside the church when two elderly ladies approached him to ask where they might leave their donations to the Ernest Lough Memorial Fund.

The record was a frequent request on the radio, and, 40 years later, "Master Lough" was still receiving gifts of candies and comics from appreciative fans who were unaware of the age of the recording.

When he left the choir in 1928 voices broke later in those days — he began a successful career in advertising, first with HMV, where he met his wife, Julie. They married in 1938.

During the Second World War he served as a firefighter. He was on duty on the night in 1941 when his beloved Temple Church was destroyed by German bombs. Subsequently, he became an advertising executive with Mather and Crowther (later Ogilvy and Mather).

The Loughs had three sons, all of whom became choristers: Peter at the Chapel Royal, Graham and Robin joining their father at the rebuilt Temple Church, to which Ernest had returned as a bass-baritone.

He sang with Peter in the 1953 coronation service (the only father and son to do so) and in 1961 made a recording with Robin, remaining a member of the Temple Choir, still under the directorship of Dr. Thalben-Ball, until 1971.

Gently spoken, a man of innate courtesy and uncomfortable in the limelight, Mr. Lough had a youthful sense of fun and a nice line in self-deprecating humour. These and Job-like patience helped him deal for more than 60 years with the endlessly repeated questions about that one day, on April 5, 1927, that unwittingly coloured the rest of his life.

He died after a short illness, and leaves his wife and three sons.



Although widely issued in Canada, **Master Lough's** sole U.S. Victor release was the "Hear My Prayer"/"Oh, for the Wings of a Dove" on Scroll Label Victor #35856.

Singer, songwriter Hank Snow, at 85; author of 'I'm Movin' On'

ASSOCIATED PRESS

NASHVILLE — Hank Snow, a country music legend with a flamboyant style whose million-selling hit "I'm Movin' On" launched a career that lasted nearly a half-century, died yesterday. He was 85.

The cause of death was probably heart failure, said his son, Jimmy Snow.

Mr. Snow's self-penned "I'm Movin' On" was on the country music charts for almost a year in 1950, including 21 weeks at No. 1. More than 60 singers, including Ray Charles and Elvis Presley, have sung its opening lines: "That big eight-wheeler rollin' round the track/Means your true lovin' daddy ain't coming back/I'm movin' on." The song was recorded in 36 languages.

Mr. Snow, who as a 12-year-old runaway bought his first guitar for \$30, tended to flashy rhinestone-studded suits and stage shows that included a horse doing tricks.

He sold more than 70 million records, and his string of hits — including "I Don't Hurt Anymore," "Music Makin' Mama From Memphis," "Rhumba Boogie" and the humorous "I've Been Everywhere" — stretched 25 years.

"People used to say of Duke Ellington that his music went beyond any genre like jazz," said Charles Wolfe, a country music historian. "Hank Snow did that for country music. You can't really pin him down to one style. He did so many so well."

He sang for American troops in



1946 PHOTO

HANK SNOW

Korea, Vietnam, Germany, France, Norway, Italy, England and Japan. He said in a 1991 interview that his appearances for troops were the highlight of his career.

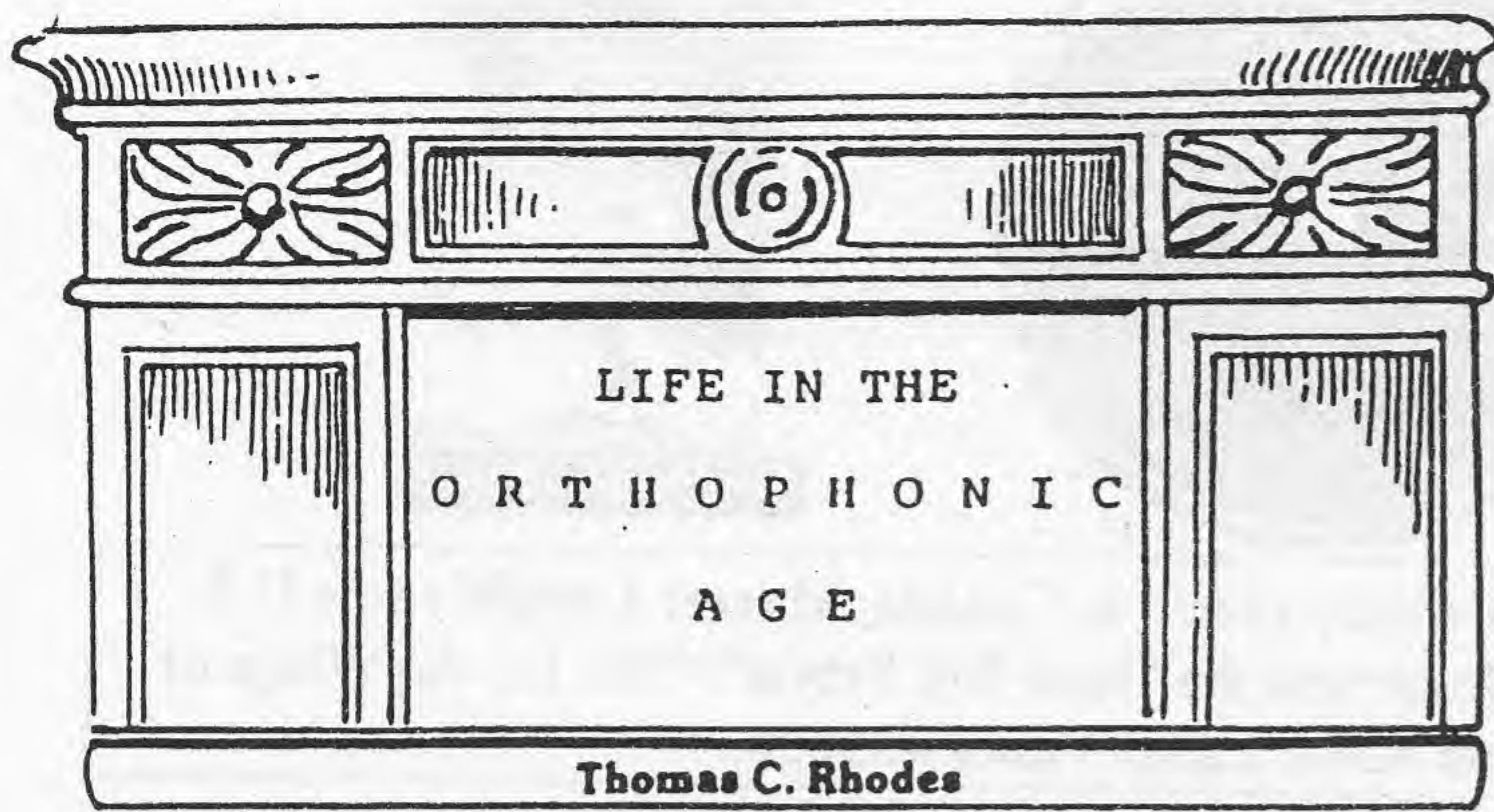
In the mid-1950s, Mr. Snow was a mentor to Presley just as Presley was breaking into the music business, and the two toured together.

Mr. Snow, nicknamed "The Singing Ranger," was elected to the Country Music Hall of Fame in 1979 and was a member of the Grand Ole Opry radio show cast for nearly 50 years.

Mr. Snow was born in Liverpool, Nova Scotia, and worked for four years as a cabin boy on a freighter.

Mr. Snow's first hit was "Marriage Vow" in 1949. His last No. 1 hit, "Hello Love," came in 1974.

Fred Kelly, brother of Gene and also a dancer, passed away in March at the age of 83. In his obituary, *The New York Times* writer claimed the Kelly brothers' father had been a sales representative for the Columbia Phonograph co., and earlier for Thomas A. Edison. **Henry Pleasants**, author of several books on music including the standard *The Great Singers: from the Dawn of Opera to Our Own Time* (1966), died in London in January at the age of 89. **Paul Rene Doguereu**, noted pianist who recorded rolls for Ampico in 1926, died in March in New Jersey. He was 91. Western singer, movie and television actor **Rex Allen** died prematurely at the end of 1999 in an unfortunate accident. Many thanks to Bill Knorp, Gavin McDonough, C. N. Dowen, Jim Tennyson, and Ken Sweeney for sharing details of this issue's deaths.



A BALANCED LOOK AT WESTERN ELECTRIC

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= Part 6 =

In Part 5, mention was made that "from the first, the Western Electric disk system was designed for electrical reproduction. Electrical disk playback had a long history at Western. As early as the fall of 1913, according to one source, a purely experimental all-electric talking machine, based on telephone principles, had been built by I. B. Crandall and F. W. Kranz for Dr. Arnold, partly in response to the disappointment over the poor sound of the commercially available mechanical players. In its circuit was placed the newly perfected Audion tube. This laboratory model worked so well that the following year a practical unit was engineered by H. C. Egerton, as yet another field into which the amplified public address could enter. This pioneer Western pickup would track both lateral and vertical disks, as would its successor, filed for patent by Egerton in early March 1916. Against the assertions of the principal author of TINFOIL TO STEREO (Walter Welch), it would seem that Western Electric had no fixed stance for only the lateral format, as this writer habitually ascribed to them, but instead acknowledged BOTH prevailing disk formats without partiality. This is clearly stated in the patent applications themselves.

A good discussion of the first "recording curve," or that used in the Western Electric disk cutting system, licensed to Victor and its rival Columbia in 1924, is given in THE RECORDING AND REPRODUCTION OF SOUND by Oliver Read and published in 1952. This book gives the reasons for the use of the compensation curve as well as some



EDWARD B. CRAFT
Engineer

1881-1929. Father of high quality electrical disk recording. Sound-on-disk motion pictures, photoelectric record reproduction and the dial telephone.

To recognize his many achievements in communications and sound reproduction Worcester Polytechnic Institute awarded Craft an honorary doctorate in 1926.

discussion of the techniques used for standard 78 mastering, and the more complex steps to making a Vitaphone transcription.

One of the most prolific inventors on the Western staff had to be H. C. Egerton. Henry Clifford Egerton was born in New York City in the fall of 1883, the son of Jonas O. Egerton and Frances Walsh Egerton. He early showed a bent for mechanical and electrical subjects in school which led him to join Western Electric not long after getting his engineering degree. Even before the formation of the special Research Branch in 1911, Egerton was working for John J. Cartty on designing, building and testing loudspeaker telephones and transmitters based partly on the earlier work on the electro-mechanical amplifiers done by Herbert Edward Shreeve. Though, from the sound research program's standpoint his most important achievements were the "phonograph transmitter" and

the later magnetic loudspeaker, Egerton was granted patents on everything from shoe making machinery to television!

For some reason Mr. Egerton left 463 West Street around 1921 and later gained the post of manager of the Edison Storage Battery plant in Orange, N.J. Why a brilliant engineer like Egerton would settle for such a mundane task seems odd of the surface. Was he at work on special projects for Mr. Edison while serving as manager? At any rate, after an acute illness of ten days while on sick leave, Henry Egerton, aged only forty, died at his home at 7 Forest Road in Madison, N.J. on February 18, 1924.

One reason for the much higher sound quality inherent in the Western Electric process of disk cutting was not only the far better nature of the equipment itself, but the fact that it could be calibrated and tested using the advanced test gear concurrently devised by the Western staff working under Dr. Arnold. At the beginning of the post-World War I resumption of the Western sound program, the team led by Maxfield obviously had the use of the Crandall type electromagnetic oscillograph with which to test the output and the setting of their own electromagnetic disk cutter. Crandall himself assisted in this. However, it is almost certain that the Maxfield team had the use of an experimental oscilloscope as early as 1920! Fellow Western staffer John B. Johnson had begun basic research into the possibilities of the cathode ray tube no later than 1919. One of his very first oscilloscopes was almost certainly used at a demonstration given to a meeting of international acoustics experts in New York City in the Fall of 1920. At the very latest, the Maxfield team had the use of one by 1921. Having the use of such a sophisticated instrument, capable of instantaneous sound wave comparisons, was a tremendous edge enjoyed by the Western staff and before 1922 available ONLY to them. (The oscilloscope is such a common lab tool that even advanced collectors do not realize it was a Western Electric invention!)

An event which has never been mentioned in any commonly available history of the phonograph to the knowledge of this writer occurred during the fall of 1922. On October 27, 1922, no less of a person than Edward Beech Craft, by then Chief Engineer at the Western Electric Company, in Woolsey Hall at Yale University, demonstrated a special filmed short subject "Audion" to this audience in New Haven. It had formerly been a silent cartoon (commissioned earlier from a New York animation studio) to which had

been added a FULLY SYNCHRONIZED MUSIC TRACK. This event was of tremendous historical significance all out of proportion to its relatively unheralded debut. It was the FIRST demonstration and playback of an electrically recorded phonograph record. It was also the FIRST ever use of a totally electric reproducing instrument for its playback. "Audion," an educational short telling the story of the vacuum tube at Western, was the first animated film ever shown with a fully synchronized, electrically recorded soundtrack.

There may have been other firsts as well. The loudspeaker used was the Egerton balanced armature magnetic unit, most suitable for large hall reproduction due to its rugged construction. This pioneer unit was finished in 1917 and submitted for a patent early the following year. It's entirely probable that this speaker was the first use of a device of that type in an academic setting. Additionally, it is possible that an experimental version of the Western Electric CONE LOUDSPEAKER might have been used for at least part of Craft's presentation. This cone type of loudspeaker, the work of N. H. Ricker and R. L. Wegel, who had worked on it since the beginning of the Maxfield project in late 1919, used a large 18-inch dual diaphragm setup, and was intended for use with office public address or a speakerphone system. It was submitted to the Patent Office only a few weeks before this Woolsey Hall event. If this CONE loudspeaker, again a magnetic type, HAD been used during the Craft lecture, it would have been the FIRST public demonstration of an electrically recorded record playing through such a speaker, a full three years before the introduction of the Brunswick Panatope!

It should be recalled that the first "Phonofilms," usually given credit for being the first electrically recorded sound movies, were not shown by DeForest to the New York Electrical Society nor later at the Rivoli Theatre till April of 1923, a full six months AFTER the Western Electric showing at Yale. It should also be borne in mind that the DeForest movies were NON-SYNCHRONOUS, an important factor in their lukewarm impression before the public. On the other hand, "Audion" was exhibited to the Yale audience as a perfectly matched production, where the music was perfectly keyed to the action in the promotional cartoon on the screen, and was not mere random accompaniment. The sound quality of the Western Electric disk was also much better than the often muddy DeForest sound on film.

Though the equipment for this Yale premier was heavy, complex and costly to make, Chief Engineer Craft had no doubt that it would revolutionize both the talking machine world and the motion picture industry. At a staff and sales meeting held in New York soon thereafter, despite this successful showing, George Cullinan, sales head of Western Electric, argued that based on current sales and trends, there would be no call for these innovations. Motion tabled!

AFTER WORD

Although the outcome of this meeting seems almost mindless to the reader of today, it should be recalled that in 1922 both the acoustic talking machine industry and Hollywood were flourishing. Cullinan, using the yearly figures for Victor from 1921, plus the quarterly reports from other makers, could have made a very good case that those businesses were doing quite well and had no use for innovations that would prove costly and make their current offerings unwanted. Elbert Hawkins, assistant sales manager, pointed out the disastrous venture of Edison into talking pictures. Craft argued for his

(cont. back page, lower left)

offering a galaxy of recording artists from around the world..

Messrs. Copeland and Dethlefson trace the history of Pathe in America, and then go into a detailed study of the various types of records made available to the domestic buyer. Trade commenced in 1914, with masters being recorded in New York, which were then shipped to Europe for manufacture; finished records were then shipped back for sale in the U.S. Realizing this was not the most timely method of distribution (!), a manufacturing plant was soon opened in this country.

The authors enumerate every known series and size of disc offered here until the quiet demise of the Pathe hill-and-dale disc in 1922. A fascinating section devoted to the manufacturing process tells how masters were transferred from original cylinder to master discs, and what is believed to be an original Pathe schematic drawing was uncovered in time for this work.

Additional Pathe-produced record products are also discussed, both lateral and hill-and-dale. At a time when popularity of Pathe sapphire ball records began to wane, they introduced the "Actuelle" record, which would play on standard Victrolas without an attachment. Newer collectors may be surprised to learn that the "Perfect" record was originally a budget Pathe product!

The work has a large section on Pathe artists, many of whom were drawn from the ranks of the great European opera houses. There are also reproductions of original literature, depicting and describing Pathe artists and records. I was truly enchanted by visions of the graceful "Lada" dancing around the Pathe studio in full costume, while Nahan Franko conducted his orchestra recordings!

Finally, the machines. There are the customary uprights and table models bearing the Pathe name and rooster, but also elaborate "period" cabinets, as well as the innovative "Actuelle" phonographs with the acoustically-driven moving cone speaker. The authors pass their date parameters slightly by showing some of the Pathe models designed to compete with the Victor Orthophonics; you guessed it: *Pathe-phonic!*

This 150+ page book, large format with comb binding, contains a wealth of information and illustrations, and is truly a pioneering work. Unfortunately, it was printed in limited number, and copies are difficult to obtain. I would suggest sending a self-addressed stamped envelope to Ron Dethlefson at 3605 Christmas Tree Lane, Bakersfield, CA 93306.

IN REVIEW

(Reviews are by the *Graphic* editor unless identified otherwise)

Pathe Records and Phonographs in America, 1914-1922, by George A. Copeland and Ronald Dethlefson.

In a collecting world dominated for years by Victor, Columbia and Edison, one might justifiably wonder, "What's next?" While it's true that these three giants monopolized the majority of the industry, many smaller companies who made significant contributions have long been overlooked by researchers. **Enter Pathe!**

A giant in the recording industry abroad, and a recognized name in early film work in the U.S., Pathe entered the American market with an innovative product: a hill-and-dale disc played with a sapphire ball,

He surely can advise of availability and possible future reprints.

Filmophone Discography, by Arthur Badrock, with company history by Frank Andrews.

Here's one that fell through the cracks, and I regret the oversight.

Described as "The World's Best Unbreakable Record," Filmophone went on the market in Britain late in 1930. In an era of budget records, Durium products, and Depression, Filmophone apparently went one better: they offered a coin-in-slot dispensing machine for their product!! But unlike Durium, Filmophone records were made from "an artificial silk material," and also, they were double-sided. To prove their claim, the company dropped a sack containing 100 Filmophone records from an airplane a

mile high over the Hanworth Aerodrome in Middlesex! These records were actually placed on sale in London in 1931.

Filmophones were pressed from a variety of sources, including U.S. Grey Gull, Cameo, Plaza, even QRS, in addition to British sources. Amid the usual fox trots and pop vocals was an unusually large variety of semi-classical and standard pieces.

The catalogue runs less than 400 issues, but it's a wonderful study of a valiant effort, combined with a unique method of distribution, during difficult economic times.

The **Filmophone Discography** (ISBN 0 902338-26-9) is available from John Booth, International Talking Machine Review, 105 Sturdee Avenue, Gillingham, Kent, England ME7 2HG. (U.S. price unknown at this writing.)

SU to build an ear to hear fragile voices

By Gloria Wright

Sarah Bernhardt's performance of Hamlet; two of only three cylinder recordings by the tenor Enrico Caruso; and a very rare recording of Pope Leo XIII made in 1903, the last year of his life, rest unheard in storage at Syracuse University.

If "Radius Project" succeeds, those voices may sing and talk again.

Researchers are developing a laser system to play some of the world's oldest sound recordings, made on wax or celluloid cylinders in the late 1800s. Some of the 22,000 cylinders in the university's collection have not been heard by SU staff for fear that jewel-tipped needles would damage their fragile surfaces.

Susan Stinson, curator of Bird Library's Belfer Audio Laboratory and Archive, is eager to hear the voices of people known only as a name or as an image in a drawing or photograph.

"You get a whole new idea of what they were like, listening to how they talk," she said. "The voices of people 100 years ago are a wonderful thing to hear."

The laser system, being developed with the help of a \$158,076 grant from the federal Institute for Museum and Library Services, will be used first on the two rarest cylinders in the Belfer collection.

The two brown wax cylinders were privately, not commercially, recorded. The case of one contains a slip of paper with the name of actor DeWolf Hopper written on it. The second has a handwritten notation: "Andrelina Patti, 1895."

A recording of Patti's voice from the 1800s would be extremely rare, perhaps unique. Patti is considered to have been perhaps the greatest coloratura soprano of the 19th century. Her only known recordings were made in 1905 and 1906, when she was in her 60s and her voice was past its prime, Stinson said.

Actor DeWolf Hopper was famous for being the first to recite the poem "Casey at the Bat" in 1888 and for his roles in Gilbert and Sullivan's "The Mikado."

His fifth wife was the actress and gossip columnist Hedda Hopper. Their son, William DeWolf Hopper Jr., played private detective Paul Drake on the long-running TV series "Perry Mason," starring Raymond Burr.

Voices from the past

Other voices on the cylinders provide a glimpse of life at the end of the 19th century, Stinson said.

A technological revolution from 1875 to 1925 produced photography, the telegraph, electricity, motion pictures, the automobile and the airplane, Stinson said. It was also a time when millions of people immigrated to the United States.

Popular songs used stereotypes to poke fun at the newcomers' languages, dress and customs.

"Today, the lyrics would be politically incorrect," Stinson said. "A lot of these songs made fun of the Germans, Italians, blacks, Irish, Jews. Women were made fun of. Men were the bumbling fathers who can't fix anything right."

The songs, she said, must be understood in the context of the times.

"There's a lot of social sciences material there," she said.

Many of the voices from the past will sound stilted, particularly political speeches, because they were recorded using the "elocutionist" or highly formal style of the times, Stinson said.

Each cylinder is 4 inches long and 2 1/4 inches in diameter, the size of "a skinny soup can," Stinson said.

Playing the wax cylinders with a stylus over the years has worn away some of the wax. And as the oils in the wax evaporate, the wax dries and the cylinders shrink, making the sound grooves a little wavy, she said.

Laser technology

William Penn, an adjunct professor of electrical engineering and computer science, is directing the design and building the prototype.

The weak light of the helium-neon laser won't hurt the cylinders' surfaces, he said.

As the cylinder rotates, the "hills and dales" in the cylinder grooves go up and down, Penn said. The laser needs to focus on the bottom of the groove and stay there.

The laser detects frequency shifts, he said.

"As the beam wiggles, the light becomes an electric signal which becomes music," he said.

Stinson said no photographs can be taken of the laser because it is proprietary.

"Hopefully, some parts of this system will be patented," she said.

Penn's goal is more modest.

"We don't claim to any novelty here. But in today's technology world, if you can carve out a little niche, you're doing well," he said.

Once a frictionless playback system is developed, the university can record its collection and make it available to researchers.

Stinson said sound bites may be put online, but copyright laws would prohibit the university from making entire recordings available to the public.

Stinson said she isn't sure in what order the recordings will be copied. Perhaps those in the best condition will go first. Or, "We may start with No. 1 and go right on through," she said.

That method could take a while. The 22,000 cylinders are part of SU's collection of 300,000 recordings. It is the nation's second largest university sound archive, behind Bowling Green University in Ohio.

The collection began in 1963, when an anonymous donation was used to purchase the stock of The Music Box in Manhattan. Copies of the store's 150,000 recordings formed the core of the archive, Stinson said.

Joseph and Max Bell, owners of the store, were born in Cuba, so the university also has a large number of Latin American recordings, many on 45s. Stinson said the university is trying to get a grant to catalog the collection.

The collection includes tapes, cylinders, aluminum discs, vinyl discs and even wire tape. But no 8-track tapes, Stinson said. Even scholars are not interested in preserving that mistaken technology.



David Lassman / Staff photographer

SUSAN STINSON, curator of the Belfer Audio Lab and Archive at Syracuse University, shows cylinder recordings and players. At left, an Edison Triumph player from about 1908.

This article originally appeared in a Syracuse, NY newspaper and was furnished by Paul Cook. Similar articles were also sent in by Nick Dowen and Jerry Johnson. We apologize for the small print in columns 2 and 3!

The Phonoscope
(January 1899)

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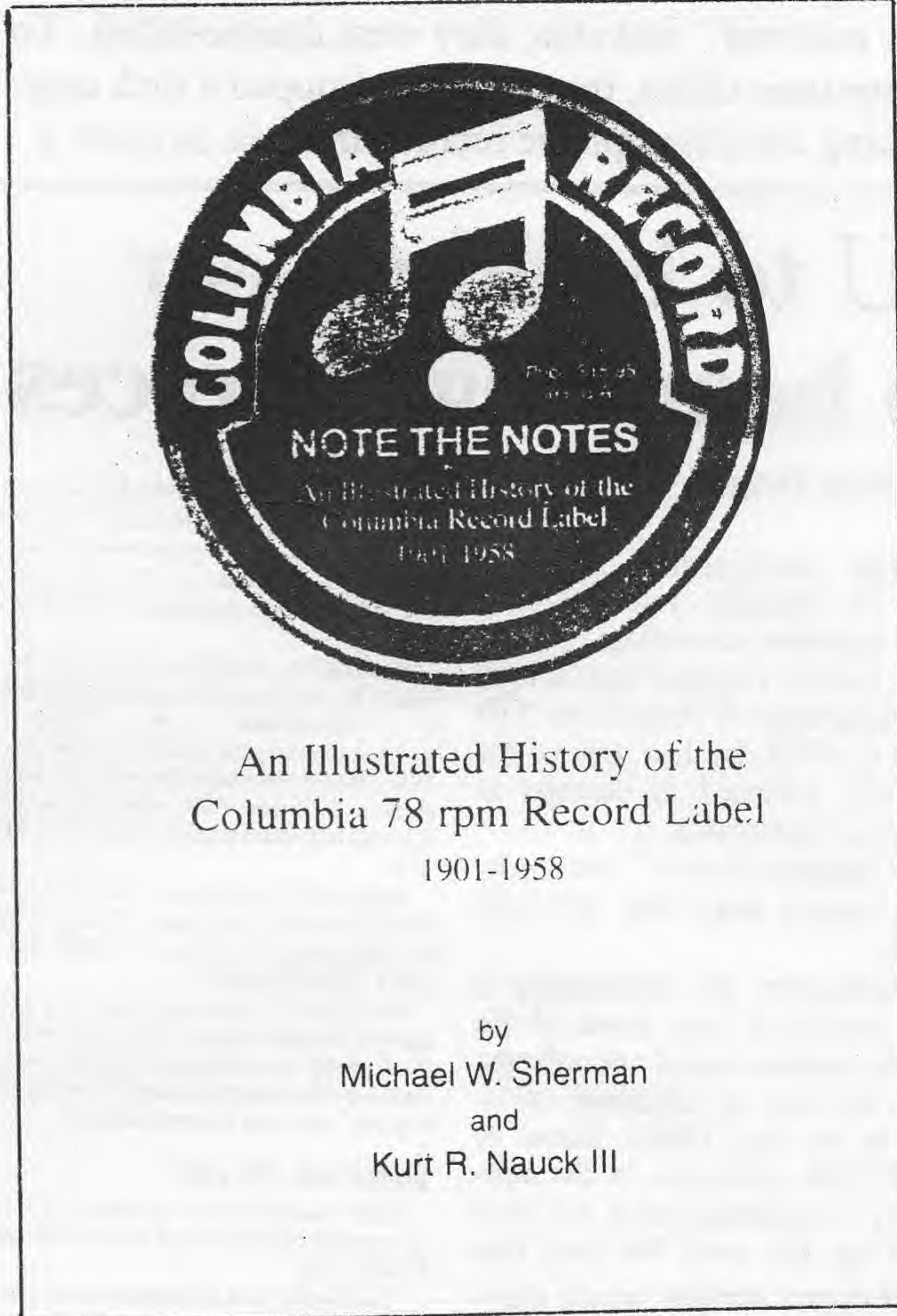


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(cont. from page 16)

"improved phonograph" for licensing income but was over-ruled. He did not give up, even when Hawkins advised him to put his pet projects back into storage. Eventually it was Craft who prevailed upon Cullinan to at least invite the Victor executives over to hear this electric disk system, nearly two years later! [ed. note: reportedly, Victor's Calvin G. Childs rejected the new system initially because "it didn't sound like a talking machine"]

It should be mentioned that part of the problem with dating mistakes found in film and phonograph histories stems from the unhappy fact that this Western Electric disk system literally sat on the shelf at 463 West Street for almost two years, until later in 1924, thus giving the false impression they were not ready until this later date.

* * *

This series will wrap up with the next issue. Included will be some rare and fascinating illustrations. -ed.

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